

CLAIMS

What is claimed is:

5 1. A mobile user device capable of anonymously accessing a network, the
mobile user device comprising:

a SIM detector detecting whether access to the network is prohibited; and

an interim identity generator generating an interim international mobile subscriber
identity (IMSI) in response to access to the network being prohibited, wherein the

10 interim IMSI is utilized for signaling exchanges requiring information corresponding
to the SIM card when access is prohibited.

2. The mobile user device of claim 1, further comprising:

a first home location register for signaling exchanges utilizing an IMSI

15 accessed from the SIM card; and

a second home location register for signaling exchanges utilizing the interim
IMSI.

3. The mobile user device of claim 1, wherein the mobile user device

20 accesses the network along a circuit-switched path.

4. The mobile user device of claim 1, wherein the mobile user device

accesses the network along a packet-switched data path.

25 5. The mobile user device of claim 1, wherein the mobile user device is
capable of accessing the network along one or more of a circuit-switched path and a
packet-switched path.

6. The mobile user device of claim 1, wherein the interim IMSI has a length of 15 digits and includes a predetermined unused interim mobile country code, a predetermined unused interim mobile network code, and pseudo-random digits associated containing a portion of an international mobile equipment identity (IMEI) associated with the mobile user device.

7. The mobile user device of claim 1, wherein the interim IMSI is generated using local information corresponding to the mobile user device.

10 8. The mobile user device of claim 1, wherein interim IMSI is generated using one or more of local information containing an international mobile equipment identity (IMEI) corresponding to the mobile user device, local information containing a pre-computed SRES, local information containing a pre-computed ciphering key, a combination of identities that reside on the SIM card, and portions of identities that reside on the SIM card.

15 9. The mobile user device of claim 1, wherein the interim identity generator generates the IMSI in response to one of the SIM detector detecting a subscriber identity module card not being inserted within the mobile user device and the SIM detector detecting that service is barred.

20 10. A wireless communication system comprising:
a first network;
a mobile user device exchanging data with the first network;
25 an interim identity generator, positioned in the mobile user device, generating an interim international mobile subscriber identity (IMSI) in response to access by the mobile user device being prohibited;
a first radio access network positioned along a first data path extending between the mobile user device and the first network, the first radio access network transmitting and receiving data exchanged between the mobile user device and the first network; and

5 a first user identity module, positioned along the first data path, detecting the presence of the interim IMSI, wherein the interim IMSI is utilized for signaling exchanges requiring information corresponding to a SIM card while access is prohibited.

10 11. The wireless communication system of claim 10, wherein the interim identity generator generates the IMSI in response to one of the SIM detector detecting the SIM card not being inserted within the mobile user device and the SIM detector detecting that service is barred

15 12. The wireless communication system of claim 10, further comprising:
a first home location register for signaling exchanges utilizing an IMSI accessed from the SIM card in response to access by the mobile user device being prohibited; and

20 13. The wireless communication system of claim 10, wherein the first data path is a packet-switched data path.

15 14. The wireless communication system of claim 10, wherein the first data path is a circuit-switched data path.

25 15. The wireless communication system of claim 10, further comprising:
a second network; and
a second user identity module positioned along a second data path extending
30 between the mobile user device and the second network, the second user identity module detecting the presence of the interim IMSI.

16. The wireless communication system of claim 15, further comprising:
a first home location register for signaling exchanges utilizing an IMSI
accessed from the SIM card in response to access by the mobile user device being
prohibited; and

5 a second home location register for signaling exchanges utilizing the interim
IMSI, wherein the first user identity module and the second user identity module
direct the interim IMSI to the second home location register, and wherein the second
home location register computes and transmits an authentication response triplet to
the mobile user device upon receipt of the interim IMSI.

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17. The wireless communication system of claim 16, wherein the first data
path is a packet-switched data path and the second data path is a circuit-switched data
path, and the mobile user device is capable of transmitting data along one of the first
data path and the second data path.

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18. The wireless communication system of claim 16, wherein the first data
path is a packet-switched data path and the second data path is a circuit-switched data
path, and the mobile user device is capable of transmitting data along the first data
path and the second data path.

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19. The wireless communication system of claim 16, further comprising a
second radio access network positioned along a third data path extending between the
mobile user device and the first network, and along a fourth data path extending
between the mobile user device and the second network, wherein the first network is a
25 packet-switched data network and the second network is a circuit-switched data
network.

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20. The wireless communication system of claim 16, wherein the interim
IMSI has a length of 15 digits and includes a predetermined unused interim mobile
country code, a predetermined unused interim mobile network code, and pseudo-
random digits associated containing a portion of an international mobile equipment
identity (IMEI) associated with the mobile user device.

21. The wireless communication system of claim 20, wherein the first data path and the third data path are packet-switched data paths, the second data path and the fourth data path are circuit-switched data paths, and the mobile user device is
5 capable of transmitting data along the packet-switched data path and the circuit-switched data path.

22. The wireless communication system of claim 21, wherein interim IMSI is generated using one or more of local information containing an international mobile equipment identity (IMEI) corresponding to the mobile user device, local information containing a pre-computed SRES, local information containing a pre-computed ciphering key, a combination of identities that reside on the SIM card, and portions of identities that reside on the SIM card.
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23. A method of anonymous network access by a mobile user device when network access is prohibited, comprising:
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detecting network access being prohibited; and
generating an interim international mobile subscriber identity (IMSI) in response to network access being prohibited.

24. The method of claim 22, wherein the interim IMSI has a length of 15 digits and includes a predetermined unused interim mobile country code, a predetermined unused interim mobile network code, and pseudo-random digits associated containing a portion of an international mobile equipment identity (IMEI) associated with the mobile user device.
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25. The method of claim 24, wherein the interim IMSI is generated using one or more of local information containing an international mobile equipment identity (IMEI) corresponding to the mobile user device, local information containing a pre-computed SRES, local information containing a pre-computed ciphering key, a combination of identities that reside on the SIM card, and portions of identities that reside on the SIM card.
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26. The method of claim 25, further comprising the steps of:
detecting whether a signaling message includes the interim IMSI;
routing the signaling message to a first home location register in response to
5 the signaling message including the interim IMSI and to a second home location
register in response to the signaling message not including the interim IMSI; and
computing and transmitting an authentication response triplet from the first
home location register to the mobile user device.

10 27. The method of claim 23, wherein the step of detecting further
comprises detecting one of a subscriber identity module card not being inserted within
a mobile user device and detecting that service is barred

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